State of Alaska
FY2007 Governor's Operating Budget

Department of Environmental Conservation
Air Quality
Results Delivery Unit Budget Summary

Air Quality Results Delivery Unit

Contribution to Department's Mission

Protect air quality.

Core Services

- Issue air quality permits to facilities that release potentially harmful pollutants.
- Provide compliance assistance and enforcement (inspections and operating report reviews).
- Community assistance to protect air quality.
- Air quality assessments.

End Results	Strategies to Achieve Results
A: Air quality is protected. Target #1: 100% compliance with air quality health standards. Measure #1: # of days exceeding the air quality health standards from human sources of pollution. Target #2: 100% compliance with air quality health standards. Measure #2: # of days exceeding the air quality health standards from natural sources of pollution.	**A1: Establish standards for air quality that are protective of public health and the environment.** Target #1: Complete assessment of health impacts of diesel fuel emissions in rural communities by the end of FY2007. Measure #1: % of assessment of health impacts of diesel fuel emissions in rural communities completed by the end of FY2007. Target #2: Complete regional haze SIP by FY2007. Measure #2: % of SIP for regional haze complete by FY2007. **A2: Improve and streamline air permit practices.** Target #1: All categories of permits have standardized applications and internal review procedures by the end of FY2005. Measure #1: % of permits categories that have standardized application and internal review procedures. Target #2: 95% of construction and minor permits issued within 130 days by the end of FY2006. Measure #2: % of construction and minor permits issued within 130 days. **A3: Minimize pollution from gasoline vehicles.** Target #1: For communities that have Inspection and Maintenance (I/M) programs, no more than 5% of vehicles are found to be out of compliance with tailpipe requirements. Measure #1: % of vehicles found to be out of compliance. **A4: Minimize pollution from stationary sources.** Target #1: 100% of facilities requiring air permits are in

	compliance. Measure #1: % of facilities found in compliance, or on an enforceable compliance schedule, or subject to formal enforcement action by the department.

Major Activities to Advance Strategies

- Establish and operate air monitors.
- Operate an automated data collection system for vehicle inspection programs.
- Improve on-line permitting services and compliance reporting for external users.
- Conduct compliance inspections and in-office compliance reviews.
- Develop foundations of an Alaska carbon strategy through research and collaboration.
- Perform in-use cold temperature tailpipe emissions testing as new technology cars are introduced into the Alaska market.

FY2007 Resources Allocated to Achieve Results

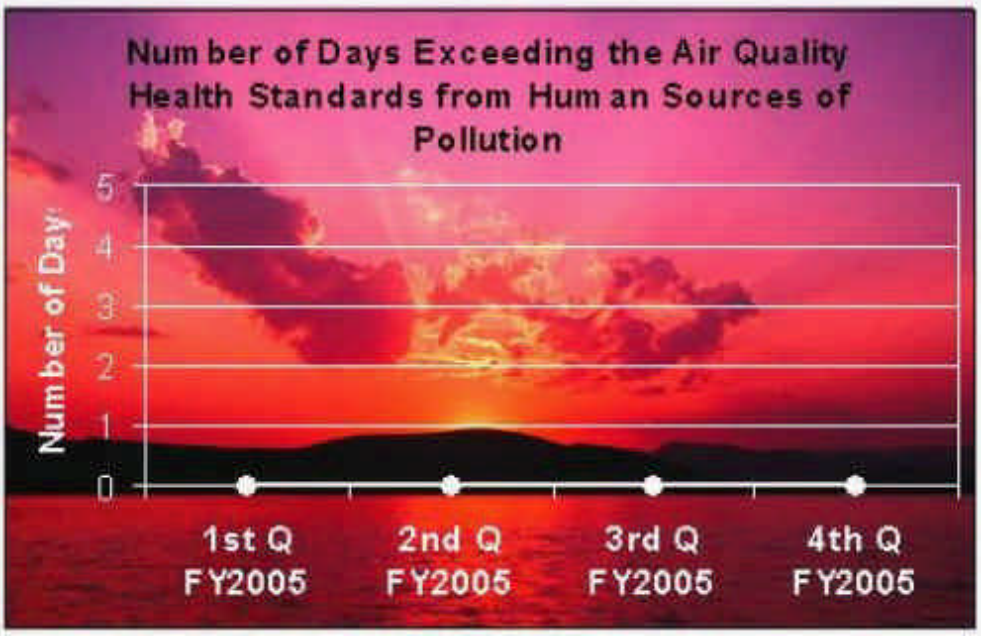
FY2007 Results Delivery Unit Budget: $7,863,600

Personnel:	
Full time	62
Part time	0
Total	62

Performance Measure Detail

A: Result - Air quality is protected.

Target #1: 100% compliance with air quality health standards.
Measure #1: # of days exceeding the air quality health standards from human sources of pollution.

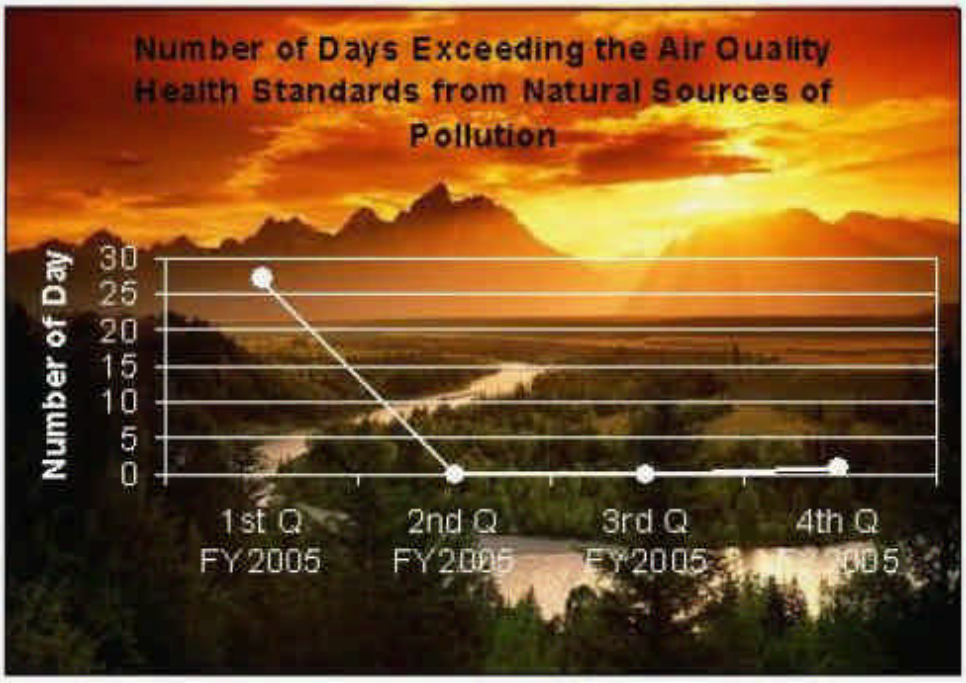


Analysis of results and challenges: DEC has been collecting ambient air data, using a statewide monitoring network, at selected locations around the state for over 20 years. Air monitoring is performed to ensure

compliance with the National Ambient Air Quality Standards (NAAQS) for the protection of public health. A majority of the State's monitoring takes place in larger communities or where complaints have been received. There were no violations of the carbon monoxide (CO) standard during the winter 2004-2005 or fine particulate standard (PM 2.5) from human caused activity.

The Air Quality division is engaged in an air monitoring project to measure before and after conditions for PM 10 airborne particle pollution (dust) as part of a Department of Transportation research project associated with paving a major roadway in central Kotzebue. Airborne dust levels violate health-based standards in Kotzebue and other rural hub communities due to dust from unpaved roads and high use off-road vehicles within these areas. The monitoring results from Kotzebue, Noorvik, and Noatak suggest that unhealthy pollution conditions exist in these communities. The Department will be working with the affected communities and the Alaska Department of Transportation to develop an effective control strategy for dust in the Region. Note: Rural data not included in graph.

Target #2: 100% compliance with air quality health standards.
Measure #2: # of days exceeding the air quality health standards from natural sources of pollution.



Analysis of results and challenges: Alaska has many sources of natural pollution; wind blown dust, volcanic dust and smoke from forest fires. Although natural in source, this form of pollution can severely impact public health and impact the public's enjoyment of Alaska.

The US EPA has provisions in the Clean Air Act which do not hold a state liable for violations of the air quality standard when it is caused by natural sources. The state is, however, required to issue air advisories warning the public of potential dangers and recommending protective action.

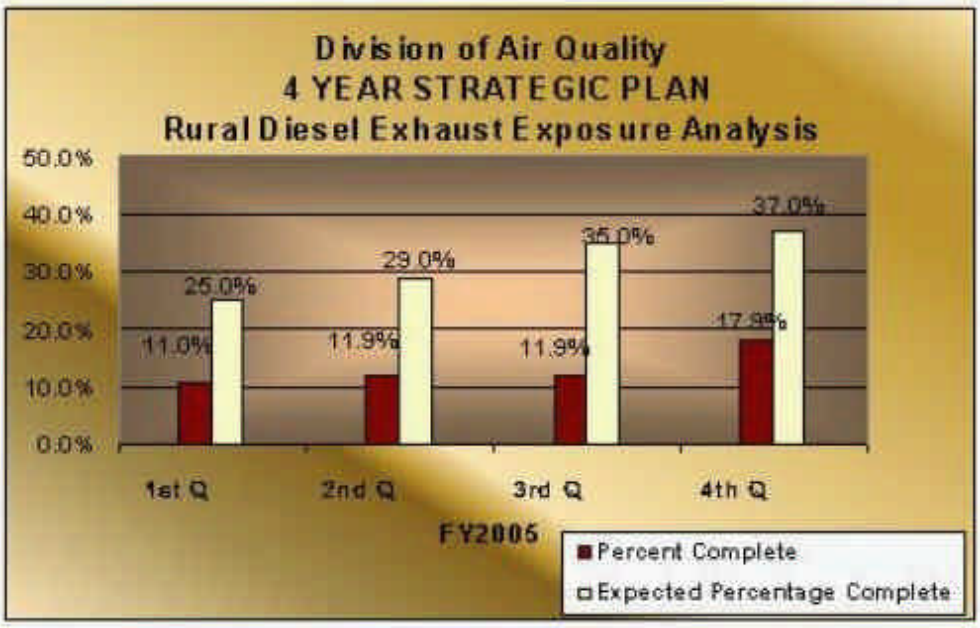
The Mat-Su Valley experienced several dust events during FY2005 with one causing an exceedance of the PM10 standards at the Butte site in April, 2005.

Twenty-seven exceedances of the fine particle standards (PM2.5) were recorded in Fairbanks during July and August of 2004 from wildfire activity in Interior Alaska and western Canada. Alaskan communities from the Canadian Border westward to the Bering Sea were impacted by smoke during what was Alaska's worst fire season on record.

A1: Strategy - Establish standards for air quality that are protective of public health and the environment.

Target #1: Complete assessment of health impacts of diesel fuel emissions in rural communities by the end of FY2007.

Measure #1: % of assessment of health impacts of diesel fuel emissions in rural communities completed by the end of FY2007.



Analysis of results and challenges: The diesel health assessment project is designed to quantify health risks due to diesel exhaust pollutants. New federal rules will reduce diesel exhaust pollution from mobile equipment, like trucks and buses. Diesel fuel use in rural Alaska is dominated by power generation and home heating equipment – not mobile sources. Federal rules do not address these rural Alaska sources of diesel exhaust and did not consider the unique source and population exposure profile of rural Alaska. Credible scientific information is needed to determine whether diesel related health impacts are occurring in rural areas and whether the costs associated with converting communities to cleaner diesel fuel are justified.

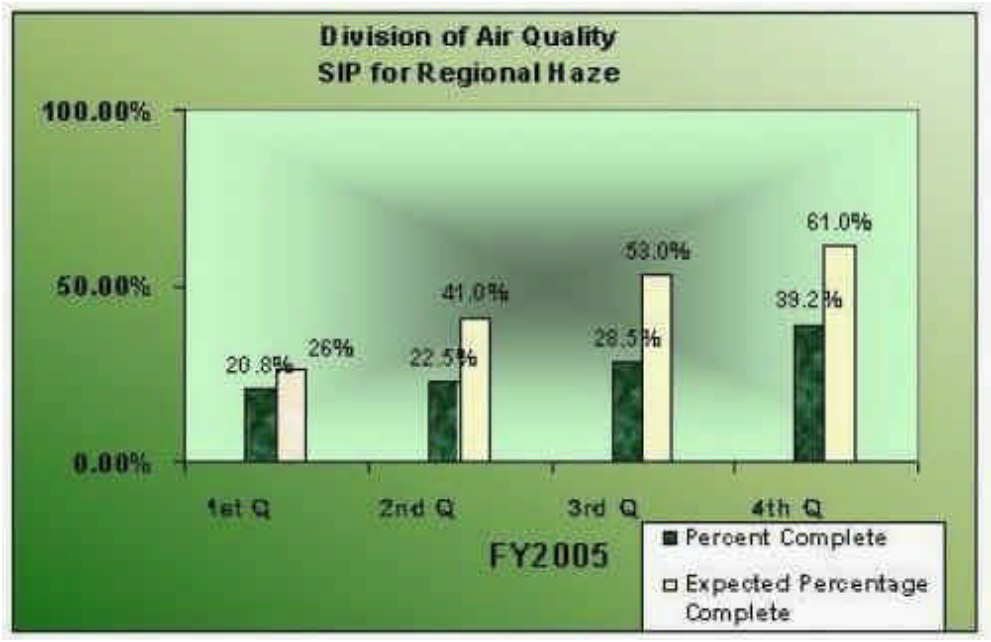
This is a multi-year project that is just getting started. During fiscal year 2004, the department developed study proposals for both the health and air monitoring components of the project. In order to develop a scientifically sound approach for the study, a group was formed to review the options. The group was comprised of DEC staff, the Alaska Native Health Board Epidemiological Center, University of Alaska Institute for Circumpolar Health, and the Environmental Protection Agency. The group evaluated a number of study options.

During fiscal year 2005, department staff worked with the University of Alaska Circumpolar Health Institute and the Alaska native Health Board to find a willing community in which to conduct a pilot study on the impacts of diesel in rural areas. Staff analyzed meteorological information to determine communities with greater potential for impacts and contacted communities to determine interest. Visits were made to present the project to prospective communities and to determine logistics. Staff collected tribal and city assembly resolutions supporting the study from each candidate community. Ambient monitoring equipment was procured. A contract was established with the University of Alaska for the health assessment work. A community was selected for the pilot project. During the coming year, the pilot study will be initiated.

To plan and conduct the project the Department will collect, analyze, and evaluate air monitoring and health data. The project is broken into major steps such as (but not limited to) project development, peer review of study design, ambient air and health data collection, analysis of data, and report drafting. The Department will measure progress towards completing the rural diesel health assessment project by tracking the major project steps.

Target #2: Complete regional haze SIP by FY2007.

Measure #2: % of SIP for regional haze complete by FY2007.



Analysis of results and challenges: A Regional Haze State Implementation Plan (SIP) is required by the Clean Air Act to address visibility concerns in Denali National Park and three wildlife refuges in Alaska. The plan is due to EPA by December 17, 2007.

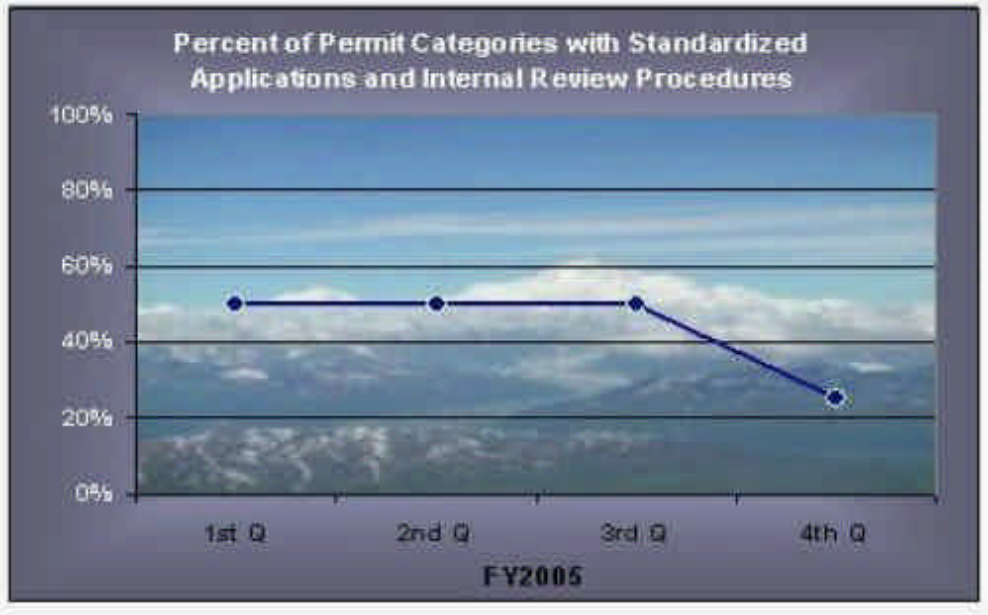
This is a multi-year project. During fiscal years 2004 and 2005, the department focused on the development of the technical information needed for the plan with help from external organizations. Federal agencies operate the primary visibility monitoring network. Alaska is a member of the Western Regional Air Partnership (WRAP), a regional planning organization that consists of states, tribes, and federal agencies. WRAP assists Alaska with developing technical information and policy tools needed for the SIP including: developing an inventory of emissions, visibility forecast models for future years and analysis of air monitoring samples. In addition to developing technical data, the department worked with land managing agencies to develop a Smoke Management Plan that will become a part of the regional haze SIP. The new Smoke Management Plan should allow for a balanced approach to managing controlled burns for resource development while also protecting visibility in Denali Park and other Alaska Class I visibility protection areas.

During the coming year, the department and these other agencies will work on developing the technical basis for the SIP and, if controls are warranted, begin evaluating of control options. To do this, the Department will collect, analyze, and evaluate visibility impacts from air pollution in these areas, and identify controls to reduce those visibility impacts. The project is broken into major steps such as (but not limited to) the collection of technical information, analysis of control strategies, drafting of the SIP document, regulation development and the public adoption process. The Department will measure progress toward completing the regional haze SIP by tracking major project steps.

A2: Strategy - Improve and streamline air permit practices.

Target #1: All categories of permits have standardized applications and internal review procedures by the end of FY2005.

Measure #1: % of permits categories that have standardized application and internal review procedures.



Analysis of results and challenges: Standardized applications and internal review procedures allow the Department to act consistently and efficiently on permit applications. Our permitting program has four distinct categories of permits: Construction permits, general permits, facility specific operating permits, and minor source permits. General permits are either general operating permits or general minor permits.

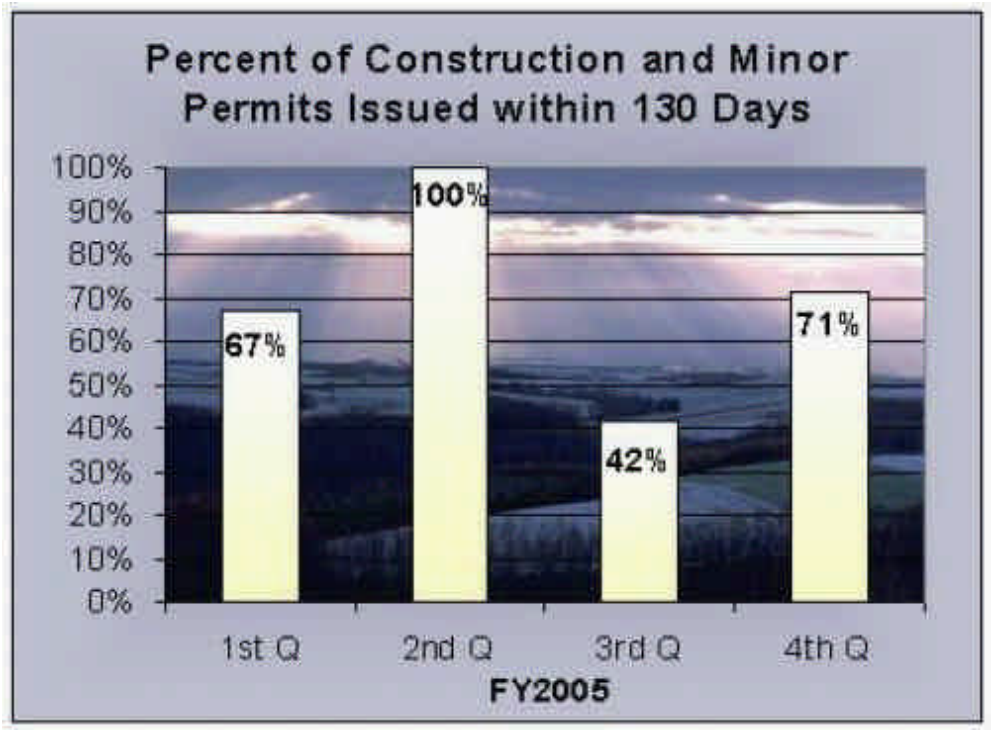
As of the October 1, 2004 effective date of new permit program regulations, all construction permits and general permits had standard applications and internal review procedures. The construction and operating permit programs have been rewritten. The existing guidance document, review procedures and application forms for construction permits need to be updated. Therefore, we have estimated that only 25% of the source categories have current standardized applications and internal review procedures.

Standard applications have been developed for minor source permits. An on-line application is nearly complete for the first general minor permit, but roll-out has been delayed pending the completion of revised regulations. We expect to offer the online application by January 2006.

Standard review procedures are approximately 50 percent complete for minor permits. This has enabled great success in issuing timely permits and will continue to improve during FY2006.

Staff turnover has slowed permit procedure development. In addition, the new fee regulations required by statute required significant changes in staff time accounting, billing, and permit processing procedures, further delaying standard permit procedure development. With new staff hired beginning FY2006, we expect to develop all standardized applications and internal review procedures by 1st Quarter FY2007.

Target #2: 95% of construction and minor permits issued within 130 days by the end of FY2006.
Measure #2: % of construction and minor permits issued within 130 days.



Analysis of results and challenges: During fiscal year 2005, 71% of construction permits and minor permits were issued within 130 days. The program's first priority was project authorization and performance in FY2005 was as expected.

One third of the permits issued were new minor permits and 87.5% of these permits were issued in less than 130 days. As a new program, some delays were expected as staff and clients learned new procedures, but those delays did not occur.

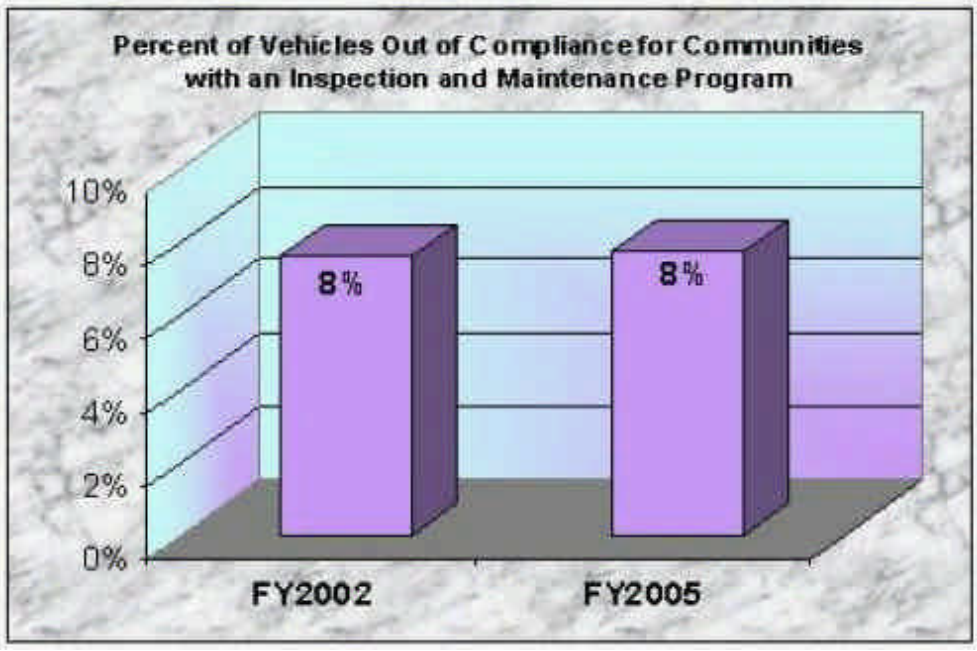
During FY2005 construction permits still followed the previous full permitting procedures and, included some long delayed construction permits. Significant staff turnover affected our ability to issue construction permits quickly. However, as more projects are authorized under the efficient minor permit procedures, we expect our overall performance to continue to improve.

Included in this year's projection for streamlining the program are: establishment of a new quality management system; implementation of on-line electronic permitting; and hiring, training and retaining staff. Program activities are on track to have improvements completed and we expect to reduce construction permitting times by the end of FY2006.

A3: Strategy - Minimize pollution from gasoline vehicles.

Target #1: For communities that have Inspection and Maintenance (I/M) programs, no more than 5% of vehicles are found to be out of compliance with tailpipe requirements.

Measure #1: % of vehicles found to be out of compliance.



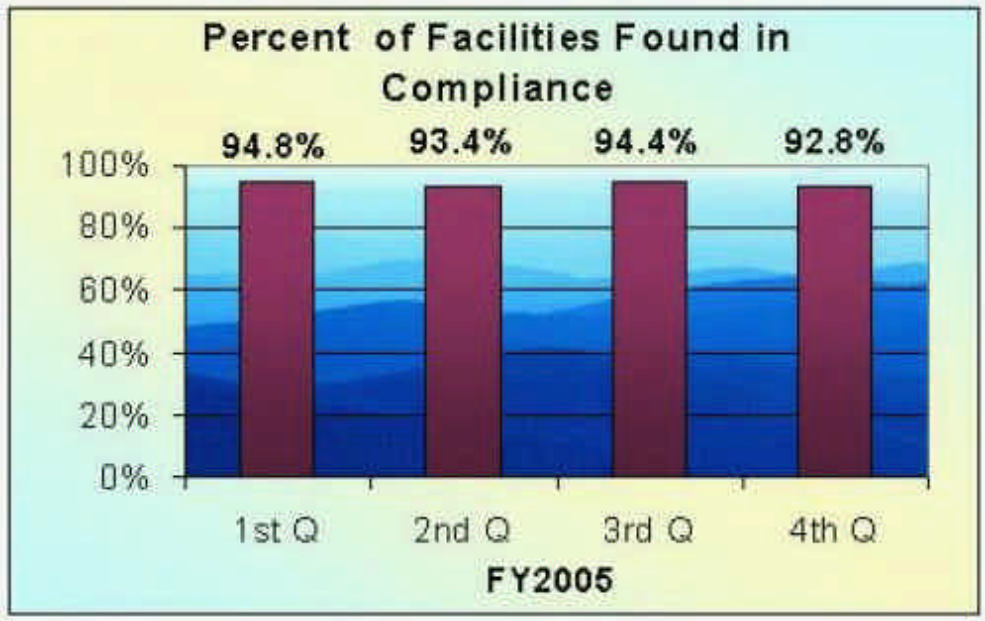
Analysis of results and challenges: Anchorage and Fairbanks exceeded health based standards for carbon monoxide in 1972. This required the start of a vehicle inspection program in 1985. Vehicles registered in both communities must pass an emission inspection to be registered or have their registration renewed by DMV. In addition, vehicle owners who live outside of Anchorage or Fairbanks but commute to work and school inside these locales are required to have an inspection.

To determine compliance with the vehicle inspection program, the department performs a survey of in-use vehicles every other year in Anchorage and Fairbanks, recording the license plate and windshield sticker information. In order to be statistically valid, approximately 10,000 non-duplicative vehicle license plate recordings are needed in Anchorage and approximately 6,000 in Fairbanks. In-use vehicle records from the survey are electronically compared to the I/M inspection database, which can identify whether the vehicle has a current inspection.

The time and location for each survey is selected very carefully. Surveys are not conducted during evenings or weekends. Emphasis is placed on areas used by the local resident, businesses, and school parking lots. Information is collected in winter when carbon monoxide problems exist. Those vehicles that do not need an inspection are excluded. The time necessary to collect the number of vehicle observations is very labor intensive. Due to these limitations of time and expense, data is collected once every two years.

A4: Strategy - Minimize pollution from stationary sources.

Target #1: 100% of facilities requiring air permits are in compliance.
Measure #1: % of facilities found in compliance, or on an enforceable compliance schedule, or subject to formal enforcement action by the department.



Analysis of results and challenges: These figures represent the number of permitted stationary sources that have unaddressed compliance issues and the total number of permitted sources. Air program inspectors record data regarding source compliance issues found through public complaints, permittee self-reporting, and during the inspectors' scheduled compliance evaluations. The program evaluates compliance status of each major permitted source no less than once every two years.

The percentage of permitted sources found in compliance was slightly lower during FY2005 as the program completed the first source compliance evaluations on the remaining permitted stationary sources. Compliance rates are still very good, with 93.9% in FY2005. The program has lost 27% of its experienced staff, including two enforcement officers over the past 15 months due to retirement and job transfers. We expect that hiring and training new staff during FY2006 will slow our compliance efforts this year. Therefore, we expect that compliance rates will remain above 92%, but will not improve and may decline slightly during FY2006.

Key RDU Challenges

Rural Alaska communities are facing a major decision about diesel fuel use. By 2007, they must decide to either incur the cost of building a separate and new fuel tank infrastructure for handling the new cleaner diesel fuel federally mandated for trucks and buses or to convert their entire community to the cleaner more expensive fuel for electrical power, heating and vehicle uses. Either case will incur significant costs for the community, individuals and the state. This division is engaged in field studies to ascertain if diesel fired power plants cause a health risk and if so, to decide if these power plants must switch to the cleaner fuel.

Significant Changes in Results to be Delivered in FY2007

None.

Major RDU Accomplishments in 2005

The department completed permit fee changes mandated by HB160 (2003). The new fees became effective January 29, 2005. The fee regulations established flat fees for a variety of air permit services and reduced the hourly rate charged for other services by an average of 34%. This completed all air permit reforms required by HB160.

In FY2005, the air permits program issued twenty-one air construction permits and eleven minor permits for new industrial stationary sources and modification to existing sources.

Air permits staff investigated one hundred forty-five citizen air pollution complaints. Staff prepared fifty-four site and fifty off-site full compliance evaluations of permitted stationary sources to help operators comply with air permits. Staff resolved sixty-five compliance problems without the need for formal enforcement action.

In FY2005, the division submitted a plan to the EPA for gradual implementation of ultra low sulfur diesel fuel for use in trucks and buses in rural Alaska. The plan recommended flexibility for rural communities to bring in the fuel as they need it, within a 2010 deadline for use of ultra low sulfur diesel in all diesel vehicles. The plan provides adequate time for DEC to assess rural health risks from diesel fuel use as necessary to support an infrastructure and fuel choice decision before 2010. EPA accepted the department recommendations and has adopted rules implementing those changes for rural Alaska that provides latitude for examining options until 2010.

The division completed a pre-paving road dust study for DOT/PF in Kotzebue to determine the effectiveness of paving to mitigate air pollution from fugitive dust from gravel roads. In FY2005 the communities of Buckland and Noatak received direct grant funding from EPA for an air quality assessment. The tribal air monitoring grant focuses on air quality issues related to road dust in small rural communities. Staff provided technical assistance to the villages in the North West Arctic Borough including Noatak, Kivalina, Noorvik, Selawik, Buckland and Ambler to assess breathable airborne particulate pollution in their communities.

Contact Information

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Air Quality
RDU Financial Summary by Component

All dollars shown in thousands

	FY2005 Actuals				FY2006 Management Plan				FY2007 Governor			
	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds
Formula Expenditures												
None.												
Non-Formula Expenditures												
Air Quality Director	214.8	0.0	0.0	214.8	231.9	0.0	0.0	231.9	241.7	0.0	0.0	241.7
Air Quality	1,211.5	1,081.2	2,983.5	5,276.2	1,268.4	1,627.5	4,434.0	7,329.9	1,560.4	1,627.5	4,434.0	7,621.9
Totals	**1,426.3**	**1,081.2**	**2,983.5**	**5,491.0**	**1,500.3**	**1,627.5**	**4,434.0**	**7,561.8**	**1,802.1**	**1,627.5**	**4,434.0**	**7,863.6**

Air Quality
Summary of RDU Budget Changes by Component
From FY2006 Management Plan to FY2007 Governor

All dollars shown in thousands

	General Funds	Federal Funds	Other Funds	Total Funds
FY2006 Management Plan	**1,500.3**	**1,627.5**	**4,434.0**	**7,561.8**
Adjustments which will continue current level of service:				
-Air Quality Director	9.4	0.0	0.0	9.4
-Air Quality	280.8	0.0	0.0	280.8
Proposed budget increases:				
-Air Quality Director	0.4	0.0	0.0	0.4
-Air Quality	11.2	0.0	0.0	11.2
FY2007 Governor	**1,802.1**	**1,627.5**	**4,434.0**	**7,863.6**